

REMARKS

In the Office Action mailed December 13, 2004, independent claim 48 was rejected under §103(a) as being unpatentable over U.S. Patent No. 6,068,300 to Vijuk, et al. in view of U.S. Patent No. 4,606,784 to Glans, et al. and further in view of U.S. Patent No. 4,812,195 to Vijuk, and independent claim 53 was rejected under §103(a) as being unpatentable over the same combination of patents, and further in view of U.S. Patent No. 6,475,129 to Lehmann. A petition for a 1-month extension of time and the corresponding fee are submitted herewith.

In view of the following remarks, reconsideration of the application is respectfully requested.

Independent claim 48 is set forth below:

48. A method of forming outserts having product information printed thereon, said method comprising:

(a) folding a sheet of paper having product information printed thereon by making a plurality of folds in said sheet of paper to form a first folded article, said folds in said sheet of paper being parallel to each other and parallel to a first direction, said folds in said sheet of paper being made using a first folding apparatus having a plurality of folding rollers;

(b) folding said first folded article by making a fold in said first folded article to form a second folded article, said fold in said first folded article being parallel to a second direction, said second direction being perpendicular to said first direction, said fold in said first folded article being made using a second folding apparatus having a plurality of folding rollers;

(c) folding said second folded article by making a fold in said second folded article to form a third folded article, said fold in said second folded article being parallel to said second direction;

(d) applying pressure to a folded article formed as a result of at least paragraphs (a), (b) and (c), said pressure being at least about 30 psi and being no greater than about 500 psi, said pressure being applied by a pressing unit having a pair of pressure rollers;

(e) depositing an adhesive on a portion of a folded article formed as a result of at least paragraphs (a), (b) and (c); and

(f) after (e), making a final fold in a folded article formed as a result of at least paragraphs (a), (b) and (c) to form an outsert, said final fold being parallel to said second direction and being made so that said adhesive holds said outsert in a substantially closed position so that said outsert has no exposed unfolded exterior edges that lie in a direction parallel to said final fold, said final fold being made using a final folding apparatus comprising a plurality of folding rollers having a nip therebetween and a movable blade member that forces a portion of a folded article formed as a result of at least paragraphs (a), (b) and (c) towards said nip between said folding rollers of said final folding apparatus.

As set forth above, claim 48 is directed to a particular method of forming bidirectionally folded outserts, that is, outserts that are formed by making folds in two perpendicular directions, using particular folding equipment.

Initially, it should be noted that the Vijuk, et al. '300 patent, as is evident from its drawings, does not disclose an apparatus for forming outserts; it only discloses various methods of forming outserts.

It should also be noted that the Vijuk '195 patent does not disclose an apparatus for forming bidirectionally folded outserts as recited in claim 48; the Vijuk '195 patent only discloses an apparatus for forming outserts that are repeatedly folded in a single fold direction, which should be evident from Figs. 2-4 of the Vijuk '195 patent.

The Glans, et al. patent does not disclose any apparatus for forming outserts. As noted below in more detail, the Glans, et al. patent is directed to any entirely different folding application and discloses an entirely different folding approach for that application.

Therefore, none of the three patents applied in connection with the rejection of claim 48 discloses folding equipment for forming bidirectionally folded outserts as recited in claim 48.

In reaching a conclusion of obviousness, the Office Action states "it would have been obvious to one having ordinary skill in the art to have modified the invention of Vijuk '300 with the pressure roller of Glans and the folding specifics of Vijuk '195 for the purpose of manufacturing a folded outsert."

It is respectfully submitted that that method recited in claim 48 would not result from the pressure roller of Glans and the folding specifics of Vijuk '195. As noted above, none of the three patents applied in the rejection, including the Vijuk '195 patent, discloses an apparatus for forming bidirectionally folded outserts. There is no indication in the Office Action how the Vijuk '195 apparatus would be modified to produce bidirectionally folded outserts.

It should be noted that the folding device with the vertically moving blade shown in Fig. 26 of the Vijuk '195 patent is used to make a particular fold, that is, that folding device is used to make the wrap-around fold 14. See column 12, lines 10-25. The Office Action does not indicate where the applied art suggests that such a folding device could or would be used to make the fold recited in claim 48. As noted in Section 2143.01 of the M.P.E.P., "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)" (emphasis original).

The Glans, et al. patent is directed to the formation of a product package, such as a milk carton, having a paper substrate which is covered on both sides by a thermoplastic material in order to make the package liquid-tight. Glans, et al. disclose a folding apparatus that makes a single fold in a sheet of material. Referring to Fig. 1 of the Glans, et al. patent, that single fold is made by no less than seven pairs of rollers, including a pair of creasing rollers 9 and six pairs of forming rollers 3, 4, as well as three individual forming rollers 3 (shown above the heating element 5). As shown in Figs. 2-6, each pair of the folding rollers 3, 4 makes a successively greater bend in the sheet of material until the single fold is completed.

It is respectfully submitted that one with ordinary skill in the outsert-forming art would consider the Glans, et al. patent to be directed to a completely different folding application than the Vijuk '195 patent. In particular, that Vijuk '195 patent is directed to a folding apparatus where an important consideration is folding speed:

Currently, outsert machines require a plurality of operators to run the machine which adds significantly to the cost of the individual outsert and the machines are limited in the amount of production of outserts per hour. The present invention is directed to providing increased speeds of operation up to, for example, 10,000 sheets per hour or more and to

providing a machine at such production which may be run by one operator. (column 1, lines 13-21)

The usual higher production machines currently available prior to this invention are sheet machines which use pre-cut sheets and which operate at much slower rates, for example, 1500 to 2500 outserts per hour. (column 1, lines)

Also another aspect of the invention is the automatic boxing of the outserts, which may be coming off the equipment at rates of 42,000 outserts per hour into boxes without requiring a separate operator to box the outserts at the discharge end of the apparatus. (column 1, lines)

It should be noted that each pair of folding rollers in the Vijuk '195 patent makes a complete fold, which provides a relatively high speed of folding in a cost-effective manner. That is contrary to the folding apparatus disclosed in the Glans, et al. patent, in which a single fold is not completed until the sheet has passed through a pair of creasing rollers 9, six pairs of folding rollers 3, 4 and three more individual forming rollers 3, a folding process which would be significantly slower. Given that the Vijuk '195 patent teaches the importance of high-speed processing done in a cost-effective manner, it is respectfully submitted that the Vijuk '195 patent teaches away from the disclosure of Glans, et al.

Given the completely different folding approach disclosed in the Glans, et al. patent, it is respectfully submitted that if one with ordinary skill in the outsert-forming art were to look at the Glans, et al. patent, he or she would likely disregard it as being irrelevant to outsert-forming and therefore not helpful.

Furthermore, the Glans, et al. patent is directed to a particular folding apparatus that is intended to address particular problems, none of which are even an issue in the folding apparatus disclosed in the Vijuk '195 patent. These particular problems are described in the Glans, et al patent as follows:

Packing containers of the non-returnable type for the packaging of e.g. milk and other liquid dairy products are manufactured from laminated packing material which includes a carrier layer of relatively stiff material, e.g. paper, which, at least on the side which is intended to be in contact with the contents, is covered with a liquid-tight, preferably thermoplastic material, e.g. polyethylene. Beside serving as a material conferring imperviousness, the thermoplastic layer is also used for making possible the heat-sealing of the laminate. For this reason, it is often advantageous if the opposite side,

that is to say the outer side, of the carrier layer is also covered with a thermoplastic material. When the packing laminate is to be converted into packing containers these are formed in a known manner by folding and sealing of the laminate, so that packing containers of the desired shape are obtained. **It is of the greatest importance that the seals, which unavoidably must be present on the finished packing container, should be completely impervious to liquid.** This is particularly difficult to achieve if seals of the 'inside-to-outside' type are used, since the lower packing laminate edge, that is to say the edge facing towards the inside of the packing container, will then come into contact with the contents, not only with the thermoplastic-covered surface, but also with the cut edge itself where the carrier layer is exposed. In the case of a carrier layer of the fibrous type, this will gradually absorb contents, which detrimentally affects the tightness and the durability of the package. To prevent this it is known to double up the internal edge zone of the material so that the inner thermoplastic layer extends around the inner edge of the packing laminate and is sealed against the inside of the outer packing laminate. In this way contact between the contents and the carrier layer is effectively prevented so that the problem of absorption of the contents into the packing material is eliminated. (column 1, lines 14-50)

It is respectfully submitted that, to overcome the above problems, the Glans, et al. patent discloses that the pressure rollers 11 are used to produce an effective liquid-tight seal, as indicated by the following excerpt of the Glans, et al. patent:

After the material web has left the last pair of rollers which is supported by the carrier elements 1, 2, it reaches the two cylindrical pressure rollers 11. With the help of these now the final doubling up and pressing together of the main part 17 and the edge zone 18 of the material web is achieved in such a way that the edge zone 18, with the help of the heated thermoplastic layer serving as an adhesive, is joined to the area of the main part 17 of the material web located underneath it. The distance between the two pressure rollers 11 is adjusted so that the web parts are pressed to each other with sufficient force to ensure that a reliable and durable seal is formed. The material web thus has been provided with the desired, doubled up and liquid-tight edge and is advanced further to be converted subsequently in a known manner to a liquid-tight material tube, which after filling with the desired contents, is converted to filled packing containers by repeated, transverse sealing operations. (column 8, lines 22-40)

Since the purpose of the pressure rollers 11 is to make an effective liquid-tight seal, and since the outserts formed by the Vijuk '195 patent are not designed as containers or to hold any liquid product and therefore do not have any seal, it is respectfully submitted that one with ordinary skill in the art would not have been motivated to add the pressure rollers 11 of Glans, et al. to the Vijuk '195 apparatus.


In view of the foregoing, it is respectfully submitted that independent claim 48 would not have been obvious in view of the applied art for any one of the reasons noted above. It is also submitted that dependent claims 49-52, independent claim 53, and dependent claims 54-58 also would not have been obvious for at least the reasons noted above.

In view of the foregoing, it is respectfully submitted that the above application is in condition for allowance. If there is any matter that the Examiner would like to discuss, he is invited to contact the undersigned representative at the telephone number set forth below.

Respectfully submitted,

MARSHALL, GERSTEIN & BORUN LLP

Date: March 30, 2005

By: 
Martin J. Hirsch
Registration No. 32,237
6300 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606-6357
(312) 474-6300